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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE **RECEIVED**

Attorney Docket No. 40399/177/NIHD OCT 23 1992

In re patent application of

GROUP 1800

Jerry M. Keith

Serial No. 07/542,149

Group Art Unit: 1814

Filed: June 22, 1990

Examiner: G. Bugaisky

For: PERTUSSIS TOXIN GENE:
CLONING AND EXPRESSION

AMENDMENT UNDER 37 CFR §1.111 AND REQUEST FOR
INTERFERENCE UNDER 37 CFR §§1.604 AND 1.607

The Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

With reference to an Official Action mailed on April 3, 1992, applicant requests formal consideration of (i) the amendments provided below and (ii) a concomitant request for the declaration of an interference between the above-captioned application, an interfering patent, and two or more additional interfering applications.

IN THE CLAIMS

Please cancel claims 2-10 without prejudice or disclaimer of the subject matter therein, and add the following claims:

11. A DNA molecule encoding a substantially detoxified mutant of at least a portion of the sequence of the S1 subunit of *Bordetella pertussis* toxin, said mutant comprising an epitope that contributes to immunoprotection against *Bordetella pertussis* toxicity.

12. A DNA molecule according to claim 11, wherein said DNA encodes a mutation at arginine 9 in which said arginine 9 is replaced by another amino acid.